5

· ·

14

What is claimed is:

A system for monitoring regulatory compliance of a vehicle,
comprising:

vehicle transponder means for transmitting vehicle compliance data; mobile detector means for sending an interrogation signal to said vehicle transponder means, and for receiving said vehicle compliance data; and

means for determining a compliance status based on the vehicle compliance data.

- 2. The system of Claim 1 wherein the vehicle compliance data is stored locally at said vehicle transponder means.
- 3. The system of Claim 1 wherein said vehicle transponder means transmits vehicle compliance data which includes an expiration date and tag type associated with a vehicle regulation.
- 4. The system of Claim 1 wherein said vehicle transponder means includes a removable, memory-bearing media containing the vehicle compliance data.
- 5. The system of Claim 1 wherein said vehicle transponder is interrogated by said mobile detector means using signals selected from the group consisting of infrared signals, radio frequency signals, radar signals, satellite tracking signals, digital signals, cellular signals, and microwave signals.
- 6. The system of Claim 1 wherein said mobile detector means includes first and second antennas for forward and aft vehicle interrogation, respectively.

20

5

- 7. The system of Claim 4 wherein said memory-bearing media comprises a smart card.
- 8. The system of Claim 4 wherein said memory-bearing media contains the vehicle compliance data in the form of an expiration date and a tag type for a plurality of vehicle regulations.
- 9. The system of Claim 4 wherein said vehicle transponder means includes means for reading the vehicle compliance data from said memory-bearing media.
- 10. The system of Claim 3 wherein said determining means compares the expiration date to a current date.
- 11. The system of Claim 1 wherein said vehicle transponder means includes means for invalidating said memory-bearing means after said vehicle transponder means has downloaded the vehicle compliance data therefrom.
- 12. The system of Claim 1 wherein said vehicle compliance data comprises a signal whose frequency is indicative of the compliance status.

5



- 13. An electronic automobile inspection system comprising: at least one smart card containing information pertaining to compliance of an automobile with a vehicle regulation;
 - a transponder having a memory;
- a card reader adapted to receive the information on said smart card and download the information to said memory of said transponder; and
- a detector having means for remotely interrogating said transponder, said transponder providing a signal to the detector in response to said interrogation, the signal being indicative of a compliance status of the automobile.